a device for sticking an anisotropic conductive layer, in which an insulating resin mixed with an inorganic filler is mixed with a conductive particle, to a circuit board or an electronic component;

a device for forming a bump, without leveling, by forming a ball by an electric spark at a tip of a metal wire on an electrode of the electronic component similarly to wire bonding and forming this on the electrode of the board by means of a capillary;

a device for mounting the electronic component on the electrode of the circuit board through positional alignment; and

a device for hardening the insulating resin interposed between the electronic component and the circuit board while correcting warp of the board with a pressure P1 applied as a pressure force to the electronic component against the circuit board and heat applied from an upper surface of the electronic component by means of a tool heated to a specified temperature and subsequently bonding the electronic component to the circuit board while alleviating a stress caused when hardening the insulating resin of the anisotropic conductive layer by reducing the pressure force to a pressure P2 lower than the pressure P1 after a lapse of a specified time, so that the electrode of the electronic component is electrically connected with the

electrode of the circuit board.

According to a 14th aspect of the present invention, there is provided an electronic component mounting method as defined in any one of the first through third aspects, wherein a mean particle diameter of the inorganic filler mixed with the insulating resin of the anisotropic conductive layer is not smaller than 3 μm.

According to a 15th aspect of the present invention, there is provided an electronic component mounting method as defined in any one of the first through third and 14th aspects, wherein the inorganic filler mixed with the insulating resin of the anisotropic conductive layer is comprised of at least two types of inorganic fillers that have a plurality of different mean particle diameters, and a mean particle diameter of one inorganic filler out of at least two types of inorganic fillers is not less than two times different from a mean particle diameter of the other inorganic filler out of at least two types of inorganic fillers.

According to a 16th aspect of the present invention, there is provided an electronic component mounting method as defined in any one of the first through third, 14th, and 15th aspects, wherein the anisotropic conductive layer has a portion brought in contact with either the electronic component or the board, the portion

having a smaller amount of inorganic filler than that of the other portion.

According to a 17th aspect of the present invention, there is provided an electronic component mounting method as defined in the 16th aspect, wherein the anisotropic conductive layer has a portion brought in contact with both the electronic component and the board, the portion having a smaller amount of inorganic filler than that of the other portion.

According to an 18th aspect of the present invention, there is provided an electronic component unit, wherein an electrode of an electronic component is electrically connected to an electrode of a circuit board with a bump formed on the electrode of the electronic component and bonded to the electrode of the circuit board in a state in which the bump is crushed with interposition of an anisotropic conductive layer, in which an insulating resin is mixed with an inorganic filler and hardened, and

the anisotropic conductive layer has a portion brought in contact with either the electronic component or the board, the portion having a smaller amount of inorganic filler than that of the other portion.

According to a 19th aspect of the present invention, there is provided an electronic component unit, wherein an electrode of an electronic component is